

APPENDIX A

CARB PM2.5 and PM10 Monitoring Station Data

CT-EMFAC Input and Output Sheets

AP-42 Calculation Worksheets



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Highest 4 Daily 24-Hour PM10 Averages

Glendora-Laurel

| Year: | 2008 | | 2009 | | 2010 | |
|----------------------------------|--------|---------------|--------|---------------|--------|---------------|
| | Date | 24-Hr Average | Date | 24-Hr Average | Date | 24-Hr Average |
| National: | | | | | | |
| First High: | Jul 5 | 81.7 | Aug 26 | 93.8 | Jul 5 | 68.9 |
| Second High: | Jul 4 | 58.7 | Jul 5 | 76.6 | Oct 15 | 55.7 |
| Third High: | Aug 29 | 55.8 | Aug 31 | 72.9 | Oct 12 | 55.6 |
| Fourth High: | Nov 16 | 51.8 | Oct 27 | 66.7 | Aug 25 | 55.5 |
| California: | | | | | | |
| First High: | | * | | * | | * |
| Second High: | | * | | * | | * |
| Third High: | | * | | * | | * |
| Fourth High: | | * | | * | | * |
| Measured: | | | | | | |
| # Days Above Nat'l Standard: | | 0 | | 0 | | 0 |
| # Days Above State Standard: | | * | | * | | * |
| Estimated: | | | | | | |
| 3-Yr Avg # Days Above Nat'l Std: | | * | | * | | * |
| # Days Above Nat'l Standard: | | 0.0 | | * | | * |
| # Days Above State Standard: | | * | | * | | * |
| State 3-Yr Maximum Average: | | * | | * | | * |
| State Annual Average: | | * | | * | | * |
| National 3-Year Average: | | * | | * | | 25 |
| National Annual Average: | | 25.4 | | 23.0 | | 26.1 |
| Year Coverage: | | 0 | | 0 | | 0 |

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Notes: All concentrations are expressed in micrograms per cubic meter.

The national annual average PM10 standard was revoked in December 2006 and is no longer in effect.

Statistics related to the revoked standard are shown in ***italics*** or ***italics***.

National exceedances are shown in **orange**. State exceedances are shown in **yellow**.

An exceedance is not necessarily a violation.

Statistics may include data that are related to an **exceptional event**.

State and national statistics may differ for the following reasons:

State statistics are based on California approved samplers, whereas national statistics are based on samplers using federal reference or equivalent methods.



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Highest 4 Daily 24-Hour PM2.5 Averages

Glendora-Laurel

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| Year: | 2008 | | 2009 | | 2010 | |
|------------------------------------|--------------------------------------|---------------|-----------------------------------|---------------|-------------------------------------|---------------|
| | Date | 24-Hr Average | Date | 24-Hr Average | Date | 24-Hr Average |
| National: | | | | | | |
| First High: | | * | | * | | * |
| Second High: | | * | | * | | * |
| Third High: | | * | | * | | * |
| Fourth High: | | * | | * | | * |
| California: | | | | | | |
| First High: | Jul 5 | 77.6 | Aug 26 | 82.9 | Jul 5 | 58.1 |
| Second High: | Nov 16 | 49.3 | Jul 5 | 75.9 | Oct 15 | 39.4 |
| Third High: | Dec 4 | 48.9 | Aug 27 | 66.7 | Jul 4 | 36.2 |
| Fourth High: | Nov 23 | 46.7 | Aug 31 | 66.1 | Dec 10 | 35.2 |
| Estimated Days > Nat'l 24-Hr Std: | | * | | * | | * |
| Measured Days > Nat'l 24-Hr Std: | | * | | * | | * |
| Nat'l 24-Hr Std Design Value: | | * | | * | | * |
| Nat'l 24-Hr Std 98th Percentile: | | * | | * | | * |
| National Annual Std Design Value: | | * | | * | | * |
| National Annual Average: | | * | | * | | * |
| State Ann'l Std Designation Value: | | 14 | | 14 | | 14 |
| State Annual Average: | | 14.3 | | * | | * |
| Year Coverage: | | * | | * | | * |
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Notes: All concentrations are expressed in micrograms per cubic meter.

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State and national statistics may differ for the following reasons:

State statistics are based on California approved samplers, whereas national statistics are based on samplers using federal reference or equivalent methods.

State and national statistics may therefore be based on different samplers.

State criteria for ensuring that data are sufficiently complete for calculating valid annual averages are more stringent than the national criteria.

Year Coverage indicates the extent to which available monitoring data represent the time of the year when concentrations are expected to be highest. 0 means that data represent none of the high period; 100 means that data represent the entire high period. A high Year Coverage does not mean that there was sufficient data for annual statistics to be considered valid.

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Highest 4 Daily 24-Hour PM10 Averages

[Azusa](#)
[FAQs](#)

| Year: | 2008 | | 2009 | | 2010 | |
|----------------------------------|--------|---------------|--------|---------------|--------|---------------|
| | Date | 24-Hr Average | Date | 24-Hr Average | Date | 24-Hr Average |
| National: | | | | | | |
| First High: | Jul 5 | 98.0 | Sep 22 | 74.0 | Aug 24 | 70.0 |
| Second High: | Nov 20 | 75.0 | Nov 3 | 65.0 | Jul 13 | 59.0 |
| Third High: | Sep 15 | 70.0 | Sep 4 | 59.0 | Apr 26 | 55.0 |
| Fourth High: | Oct 21 | 70.0 | Sep 28 | 56.0 | Aug 18 | 54.0 |
| California: | | | | | | |
| First High: | Jul 5 | 96.0 | Sep 22 | 72.0 | Aug 24 | 68.0 |
| Second High: | Nov 20 | 74.0 | Nov 3 | 64.0 | Jul 13 | 58.0 |
| Third High: | Oct 21 | 69.0 | Sep 4 | 58.0 | Apr 26 | 54.0 |
| Fourth High: | Sep 15 | 68.0 | Sep 28 | 54.0 | Aug 18 | 53.0 |
| Measured: | | | | | | |
| # Days Above Nat'l Standard: | 0 | | 0 | | 0 | |
| # Days Above State Standard: | 12 | | 7 | | 5 | |
| Estimated: | | | | | | |
| 3-Yr Avg # Days Above Nat'l Std: | * | | * | | * | |
| # Days Above Nat'l Standard: | * | | * | | 0.0 | |
| # Days Above State Standard: | * | | * | | * | |
| State 3-Yr Maximum Average: | 32 | | * | | * | |
| State Annual Average: | * | | * | | * | |
| National 3-Year Average: | 34 | | 33 | | 31 | |
| National Annual Average: | 32.0 | | 30.3 | | 29.8 | |
| Year Coverage: | 77 | | 88 | | 93 | |

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Notes: All concentrations are expressed in micrograms per cubic meter.

The national annual average PM10 standard was revoked in December 2006 and is no longer in effect.

Statistics related to the revoked standard are shown in ***italics*** or ***italics***.

National exceedances are shown in **orange**. State exceedances are shown in **yellow**.

An exceedance is not necessarily a violation.

Statistics may include data that are related to an **exceptional event**.

State and national statistics may differ for the following reasons:

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Highest 4 Daily 24-Hour PM10 Averages

Azusa

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| Year: | 2005 | | 2006 | | 2007 | |
|----------------------------------|--------|---------------|--------|---------------|--------|---------------|
| | Date | 24-Hr Average | Date | 24-Hr Average | Date | 24-Hr Average |
| National: | | | | | | |
| First High: | Mar 11 | 76.0 | Jul 4 | 81.0 | Jul 5 | 165.0 |
| Second High: | Sep 1 | 65.0 | May 11 | 68.0 | Apr 12 | 83.0 |
| Third High: | Aug 26 | 64.0 | Feb 4 | 64.0 | Nov 20 | 80.0 |
| Fourth High: | Aug 30 | 63.0 | Feb 10 | 64.0 | Aug 16 | 71.0 |
| California: | | | | | | |
| First High: | Mar 11 | 75.0 | Jul 4 | 79.0 | Jul 5 | 161.0 |
| Second High: | Sep 1 | 64.0 | May 11 | 66.0 | Apr 12 | 81.0 |
| Third High: | Aug 26 | 63.0 | Feb 4 | 63.0 | Nov 20 | 78.0 |
| Fourth High: | Aug 30 | 61.0 | Feb 10 | 63.0 | Aug 16 | 70.0 |
| Measured: | | | | | | |
| # Days Above Nat'l Standard: | 0 | | 0 | | 1 | |
| # Days Above State Standard: | 10 | | 7 | | 11 | |
| Estimated: | | | | | | |
| 3-Yr Avg # Days Above Nat'l Std: | * | | * | | 2.0 | |
| # Days Above Nat'l Standard: | 0.0 | | 0.0 | | 6.1 | |
| # Days Above State Standard: | * | | 47.1 | | * | |
| State 3-Yr Maximum Average: | 43 | | 32 | | 32 | |
| State Annual Average: | * | | 31.9 | | * | |
| National 3-Year Average: | 37 | | 33 | | 35 | |
| National Annual Average: | 34.8 | | 32.6 | | 37.7 | |
| Year Coverage: | 88 | | 89 | | 95 | |

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Highest 4 Daily 24-Hour PM2.5 Averages

Azusa

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| Year: | 2008 | | 2009 | | 2010 | |
|------------------------------------|--------------------------------------|-----------------------------------|--------|-------------------------------------|--------|---------------|
| | Date | 24-Hr Average | Date | 24-Hr Average | Date | 24-Hr Average |
| National: | | | | | | |
| First High: | Nov 23 | 53.0 | Aug 26 | 72.0 | Apr 2 | 44.4 |
| Second High: | Nov 16 | 48.1 | Jan 1 | 46.9 | Oct 14 | 35.4 |
| Third High: | Dec 2 | 39.2 | Jan 2 | 46.9 | Dec 10 | 31.5 |
| Fourth High: | Dec 4 | 39.1 | Mar 20 | 42.9 | Jul 4 | 24.9 |
| California: | | | | | | |
| First High: | Nov 23 | 53.0 | Aug 26 | 72.0 | Apr 2 | 44.4 |
| Second High: | Nov 16 | 48.1 | Jan 1 | 46.9 | Oct 14 | 35.4 |
| Third High: | Dec 2 | 39.2 | Jan 2 | 46.9 | Dec 10 | 31.5 |
| Fourth High: | Dec 4 | 39.1 | Mar 20 | 42.9 | Jul 4 | 24.9 |
| Estimated Days > Nat'l 24-Hr Std: | 6.1 | | * | | | * |
| Measured Days > Nat'l 24-Hr Std: | 5 | | 6 | | | 1 |
| Nat'l 24-Hr Std Design Value: | 41 | | 42 | | | 38 |
| Nat'l 24-Hr Std 98th Percentile: | 34.8 | | 42.9 | | | 35.4 |
| National Annual Std Design Value: | 15.1 | | * | | | * |
| National Annual Average: | 14.0 | | * | | | * |
| State Ann'l Std Designation Value: | * | | * | | | * |
| State Annual Average: | * | | * | | | * |
| Year Coverage: | 89 | | 40 | | | 26 |
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Notes: All concentrations are expressed in micrograms per cubic meter.

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Highest 4 Daily 24-Hour PM2.5 Averages

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| Year: | 2005 | | 2006 | | 2007 | |
|------------------------------------|--------|---------------|--------|---------------|--------|---------------|
| | Date | 24-Hr Average | Date | 24-Hr Average | Date | 24-Hr Average |
| National: | | | | | | |
| First High: | Jul 5 | 132.6 | Nov 23 | 52.7 | Nov 18 | 63.8 |
| Second High: | Nov 7 | 61.0 | Feb 4 | 52.3 | Nov 20 | 57.9 |
| Third High: | Jul 4 | 59.2 | Nov 24 | 49.5 | Oct 26 | 56.5 |
| Fourth High: | Oct 21 | 57.0 | Nov 22 | 40.7 | Nov 19 | 55.1 |
| California: | | | | | | |
| First High: | Jul 5 | 132.6 | Nov 23 | 52.7 | Nov 18 | 63.8 |
| Second High: | Nov 7 | 61.0 | Feb 4 | 52.3 | Nov 20 | 57.9 |
| Third High: | Jul 4 | 59.2 | Nov 24 | 49.5 | Oct 26 | 56.5 |
| Fourth High: | Oct 21 | 57.0 | Nov 22 | 40.7 | Nov 19 | 55.1 |
| Estimated Days > Nat'l 24-Hr Std: | * | | * | | | * |
| Measured Days > Nat'l 24-Hr Std: | 18 | | 8 | | | 19 |
| Nat'l 24-Hr Std Design Value: | 54 | | 48 | | | 47 |
| Nat'l 24-Hr Std 98th Percentile: | 53.2 | | 38.4 | | | 49.2 |
| National Annual Std Design Value: | 18.2 | | 16.9 | | | 16.0 |
| National Annual Average: | 16.9 | | 15.4 | | | 15.7 |
| State Ann'l Std Designation Value: | * | | * | | | * |
| State Annual Average: | * | | * | | | * |
| Year Coverage: | 74 | | 67 | | | 81 |

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VMT Distribution by Speed by Segment

57/60 2009 Existing

| Speed Bin ID | Speed Range | Entire Corridor | | | | Segment1 | | Segment2 | |
|--------------|-----------------|-----------------|-------|---------|-------|----------|-------|----------|---------|
| | | Tot VMT | Tot % | PK VMT | PK % | OP VMT | OP % | PK % | OP % |
| 1 | <5 mph | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0.00 | 0.00 |
| 2 | 5 mph ~ 10 mph | 2814 | 0.08 | 2814 | 0.15 | 0 | 0.00 | 0.15 | 0.00 |
| 3 | 10 mph ~ 15 mph | 3232 | 0.09 | 3232 | 0.17 | 0 | 0.00 | 0.17 | 0.00 |
| 4 | 15 mph ~ 20 mph | 50014 | 1.38 | 46377 | 2.48 | 3637 | 0.21 | 2.48 | 0.21 |
| 5 | 20 mph ~ 25 mph | 128451 | 3.56 | 106642 | 5.70 | 21809 | 1.25 | 5.70 | 1.25 |
| 6 | 25 mph ~ 30 mph | 430133 | 11.91 | 368227 | 19.70 | 61906 | 3.55 | 19.70 | 3.55 |
| 7 | 30 mph ~ 35 mph | 523428 | 14.49 | 371147 | 19.85 | 152281 | 8.74 | 19.85 | 8.74 |
| 8 | 35 mph ~ 40 mph | 393448 | 10.89 | 159467 | 8.53 | 233981 | 13.43 | 8.53 | 13.43 |
| 9 | 40 mph ~ 45 mph | 152236 | 4.22 | 19543 | 1.05 | 132693 | 7.62 | 1.05 | 7.62 |
| 10 | 45 mph ~ 50 mph | 33901 | 0.94 | 24463 | 1.31 | 9438 | 0.54 | 1.31 | 0.54 |
| 11 | 50 mph ~ 55 mph | 144050 | 3.99 | 62650 | 3.35 | 81400 | 4.67 | 3.35 | 4.67 |
| 12 | 55 mph ~ 60 mph | 194758 | 5.39 | 45646 | 2.44 | 149112 | 8.56 | 2.44 | 8.56 |
| 13 | 60 mph ~ 65 mph | 1554868 | 43.06 | 659186 | 35.26 | 895682 | 51.42 | 35.26 | 51.42 |
| 14 | 65 mph ~ 70 mph | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0.00 | 0.00 |
| 15 | >70 mph | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0.00 | 0.00 |
| Total | | 3611333 | 100 | 1869394 | 100 | 1741939 | 100 | 1869394 | 1741939 |

Scenario: 2009 Existing

Geographic Area: Los Angeles (SC)

Analysis Year: 2009

Season: Annual

Truck %

PK: 8 %

OP: 8 %

VMT Distribution by Speed by Segment

57/60 2017 No-build

| Speed Bin ID | Speed Range | Entire Corridor | | | | Segment1 | | Segment2 | |
|--------------|-----------------|-----------------|-------|---------|-------|----------|-------|----------|---------|
| | | Tot VMT | Tot % | PK VMT | PK % | OP VMT | OP % | PK % | OP % |
| 1 | <5 mph | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0.00 | 0.00 |
| 2 | 5 mph ~ 10 mph | 2522 | 0.07 | 2522 | 0.13 | 0 | 0.00 | 0.13 | 0.00 |
| 3 | 10 mph ~ 15 mph | 21568 | 0.57 | 21568 | 1.08 | 0 | 0.00 | 1.08 | 0.00 |
| 4 | 15 mph ~ 20 mph | 296079 | 7.80 | 150887 | 7.55 | 145192 | 8.08 | 7.55 | 8.08 |
| 5 | 20 mph ~ 25 mph | 152637 | 4.02 | 126771 | 6.34 | 25866 | 1.44 | 6.34 | 1.44 |
| 6 | 25 mph ~ 30 mph | 536084 | 14.12 | 448362 | 22.43 | 87722 | 4.88 | 22.43 | 4.88 |
| 7 | 30 mph ~ 35 mph | 479146 | 12.62 | 283481 | 14.18 | 195665 | 10.88 | 14.18 | 10.88 |
| 8 | 35 mph ~ 40 mph | 608108 | 16.02 | 197935 | 9.90 | 410173 | 22.82 | 9.90 | 22.82 |
| 9 | 40 mph ~ 45 mph | 117037 | 3.08 | 10455 | 0.52 | 106582 | 5.93 | 0.52 | 5.93 |
| 10 | 45 mph ~ 50 mph | 281250 | 7.41 | 142576 | 7.13 | 138674 | 7.71 | 7.13 | 7.71 |
| 11 | 50 mph ~ 55 mph | 66041 | 1.74 | 32471 | 1.62 | 33570 | 1.87 | 1.62 | 1.87 |
| 12 | 55 mph ~ 60 mph | 15610 | 0.41 | 7880 | 0.39 | 7730 | 0.43 | 0.39 | 0.43 |
| 13 | 60 mph ~ 65 mph | 1220114 | 32.14 | 573658 | 28.70 | 646456 | 35.96 | 28.70 | 35.96 |
| 14 | 65 mph ~ 70 mph | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0.00 | 0.00 |
| 15 | >70 mph | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0.00 | 0.00 |
| | Total | 3796196 | 100 | 1998566 | 100 | 1797630 | 100 | 1998566 | 1797630 |

Scenario: 2017 No-build

Geographic Area: Los Angeles (SC)

Analysis Year: 2017

Season: Annual

Truck %

PK: 8 %

OP: 8 %

VMT Distribution by Speed by Segment

57/60 2017 Alternative 2

| Speed Bin ID | Speed Range | Entire Corridor | | | | Segment1 | | Segment2 | |
|--------------|-----------------|-----------------|-------|---------|-------|----------|-------|----------|---------|
| | | Tot VMT | Tot % | PK VMT | PK % | OP VMT | OP % | PK % | OP % |
| 1 | <5 mph | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0.00 | 0.00 |
| 2 | 5 mph ~ 10 mph | 4747 | 0.12 | 4747 | 0.23 | 0 | 0.00 | 0.23 | 0.00 |
| 3 | 10 mph ~ 15 mph | 27623 | 0.73 | 27623 | 1.35 | 0 | 0.00 | 1.35 | 0.00 |
| 4 | 15 mph ~ 20 mph | 37549 | 0.99 | 33557 | 1.64 | 3992 | 0.23 | 1.64 | 0.23 |
| 5 | 20 mph ~ 25 mph | 145708 | 3.83 | 121544 | 5.95 | 24164 | 1.38 | 5.95 | 1.38 |
| 6 | 25 mph ~ 30 mph | 489703 | 12.88 | 416178 | 20.36 | 73525 | 4.19 | 20.36 | 4.19 |
| 7 | 30 mph ~ 35 mph | 430911 | 11.34 | 281204 | 13.76 | 149707 | 8.52 | 13.76 | 8.52 |
| 8 | 35 mph ~ 40 mph | 492768 | 12.96 | 179847 | 8.80 | 312921 | 17.81 | 8.80 | 17.81 |
| 9 | 40 mph ~ 45 mph | 159589 | 4.20 | 12168 | 0.60 | 147421 | 8.39 | 0.60 | 8.39 |
| 10 | 45 mph ~ 50 mph | 71546 | 1.88 | 53187 | 2.60 | 18359 | 1.05 | 2.60 | 1.05 |
| 11 | 50 mph ~ 55 mph | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0.00 | 0.00 |
| 12 | 55 mph ~ 60 mph | 178495 | 4.70 | 9212 | 0.45 | 169283 | 9.64 | 0.45 | 9.64 |
| 13 | 60 mph ~ 65 mph | 1762333 | 46.37 | 904983 | 44.27 | 857350 | 48.80 | 44.27 | 48.80 |
| 14 | 65 mph ~ 70 mph | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0.00 | 0.00 |
| 15 | >70 mph | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0.00 | 0.00 |
| Total | | 3800972 | 100 | 2044250 | 100 | 1756722 | 100 | 2044250 | 1756722 |

Scenario: 2017 Alt 2

Geographic Area: Los Angeles (SC)

Analysis Year: 2017

Season: Annual

Truck %

PK: 8 %

OP: 8 %

VMT Distribution by Speed by Segment

57/60 2037 No-build

| Speed Bin ID | Speed Range | Entire Corridor | | | | Segment1 | | Segment2 | | |
|--------------|-----------------|-----------------|-------|---------|-------|----------|-------|----------|---------|-------|
| | | Tot VMT | Tot % | PK VMT | PK % | OP VMT | OP % | PK % | OP % | PK % |
| 1 | <5 mph | 6039 | 0.14 | 6039 | 0.26 | 0 | 0.00 | 0.26 | 0.00 | 0.00 |
| 2 | 5 mph ~ 10 mph | 8747 | 0.21 | 8747 | 0.38 | 0 | 0.00 | 0.38 | 0.00 | 0.00 |
| 3 | 10 mph ~ 15 mph | 59480 | 1.41 | 55454 | 2.42 | 4026 | 0.21 | 2.42 | 0.21 | 0.21 |
| 4 | 15 mph ~ 20 mph | 194127 | 4.59 | 159645 | 6.96 | 34482 | 1.78 | 6.96 | 1.78 | 1.78 |
| 5 | 20 mph ~ 25 mph | 346698 | 8.19 | 295064 | 12.86 | 51634 | 2.67 | 12.86 | 2.67 | 2.67 |
| 6 | 25 mph ~ 30 mph | 522314 | 12.35 | 447627 | 19.51 | 74687 | 3.86 | 19.51 | 3.86 | 3.86 |
| 7 | 30 mph ~ 35 mph | 627383 | 14.83 | 362647 | 15.80 | 264736 | 13.67 | 15.80 | 13.67 | 13.67 |
| 8 | 35 mph ~ 40 mph | 721153 | 17.04 | 146199 | 6.37 | 574954 | 29.69 | 6.37 | 29.69 | 29.69 |
| 9 | 40 mph ~ 45 mph | 279234 | 6.60 | 150401 | 6.55 | 128833 | 6.65 | 6.55 | 6.65 | 6.65 |
| 10 | 45 mph ~ 50 mph | 97595 | 2.31 | 97595 | 4.25 | 0 | 0.00 | 4.25 | 0.00 | 0.00 |
| 11 | 50 mph ~ 55 mph | 92762 | 2.19 | 10695 | 0.47 | 82067 | 4.24 | 0.47 | 4.24 | 4.24 |
| 12 | 55 mph ~ 60 mph | 53008 | 1.25 | 53008 | 2.31 | 0 | 0.00 | 2.31 | 0.00 | 0.00 |
| 13 | 60 mph ~ 65 mph | 1222417 | 28.89 | 501568 | 21.86 | 720849 | 37.23 | 21.86 | 37.23 | 37.23 |
| 14 | 65 mph ~ 70 mph | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0.00 | 0.00 | 0.00 |
| 15 | >70 mph | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0.00 | 0.00 | 0.00 |
| Total | | 4230957 | 100 | 2294689 | 100 | 1936268 | 100 | 2294689 | 1936268 | |

Scenario: 2037 No-build

Geographic Area: Los Angeles (SC)

Analysis Year: 2037

Season: Annual

Truck %

PK: 8 %

OP: 8 %

VMT Distribution by Speed by Segment

57/60 2037 Alternative 2

| Speed Bin ID | Speed Range | Entire Corridor | | | | Segment1 | | Segment2 | |
|--------------|-----------------|-----------------|-------|---------|-------|----------|-------|----------|---------|
| | | Tot VMT | Tot % | PK VMT | PK % | OP VMT | OP % | PK % | OP % |
| 1 | <5 mph | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0.00 | 0.00 |
| 2 | 5 mph ~ 10 mph | 6203 | 0.15 | 6203 | 0.27 | 0 | 0.00 | 0.27 | 0.00 |
| 3 | 10 mph ~ 15 mph | 43149 | 1.02 | 39115 | 1.68 | 4034 | 0.21 | 1.68 | 0.21 |
| 4 | 15 mph ~ 20 mph | 92030 | 2.18 | 50525 | 2.16 | 41505 | 2.20 | 2.16 | 2.20 |
| 5 | 20 mph ~ 25 mph | 257975 | 6.11 | 227367 | 9.74 | 30608 | 1.62 | 9.74 | 1.62 |
| 6 | 25 mph ~ 30 mph | 541225 | 12.81 | 437396 | 18.74 | 103829 | 5.49 | 18.74 | 5.49 |
| 7 | 30 mph ~ 35 mph | 404674 | 9.58 | 203107 | 8.70 | 201567 | 10.66 | 8.70 | 10.66 |
| 8 | 35 mph ~ 40 mph | 549292 | 13.00 | 202994 | 8.70 | 346298 | 18.32 | 8.70 | 18.32 |
| 9 | 40 mph ~ 45 mph | 112683 | 2.67 | 14247 | 0.61 | 98436 | 5.21 | 0.61 | 5.21 |
| 10 | 45 mph ~ 50 mph | 63553 | 1.50 | 63553 | 2.72 | 0 | 0.00 | 2.72 | 0.00 |
| 11 | 50 mph ~ 55 mph | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0.00 | 0.00 |
| 12 | 55 mph ~ 60 mph | 325988 | 7.72 | 231840 | 9.93 | 94148 | 4.98 | 9.93 | 4.98 |
| 13 | 60 mph ~ 65 mph | 1827673 | 43.26 | 857489 | 36.74 | 970184 | 51.32 | 36.74 | 51.32 |
| 14 | 65 mph ~ 70 mph | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0.00 | 0.00 |
| 15 | >70 mph | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0.00 | 0.00 |
| Total | | 4224445 | 100 | 2333836 | 100 | 1890609 | 100 | 2333836 | 1890609 |

Scenario: 2037 Alt 2

Geographic Area: Los Angeles (SC)

Analysis Year: 2037

Season: Annual

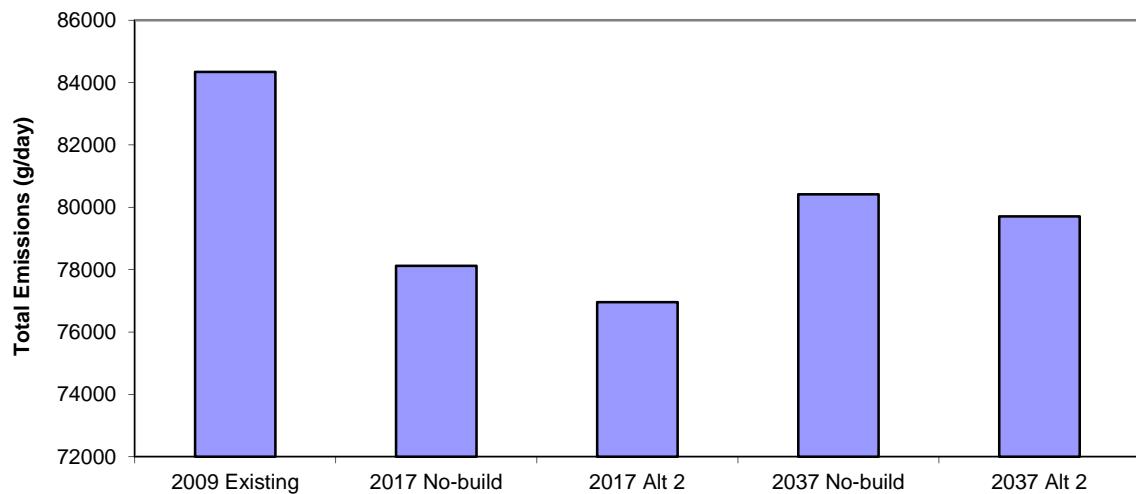
Truck %

PK: 8 %

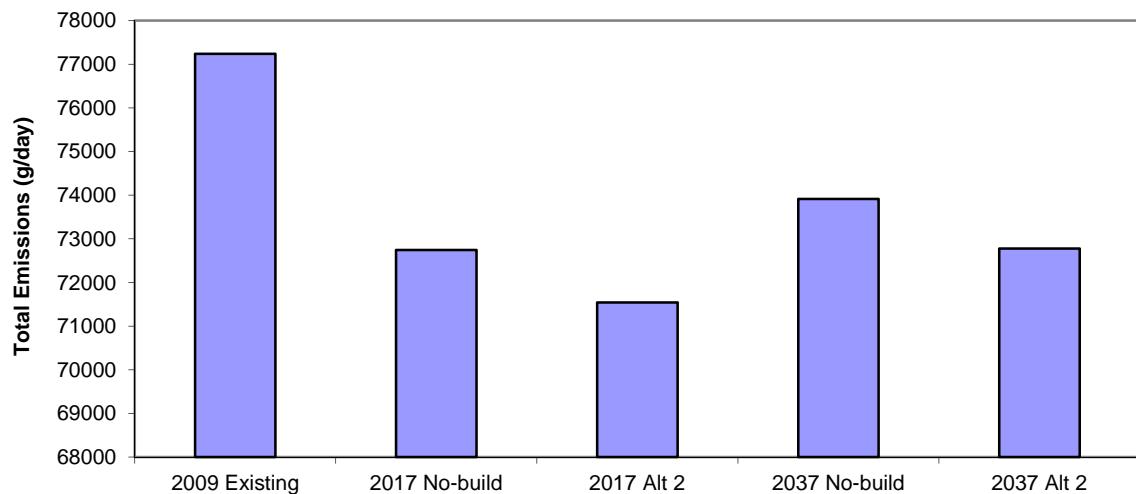
OP: 8 %

| Total Emissions | 2009 Existing | 2017 No-build | 2017 Alt 2 | 2037 No-build | 2037 Alt 2 |
|----------------------|---------------|---------------|------------|---------------|------------|
| TOG (g/day) | 835050 | 474916 | 453592 | 280644 | 275519 |
| CO (g/day) | 11477532 | 6252182 | 6101027 | 3188474 | 3147404 |
| NOx (g/day) | 2502284 | 1311922 | 1362969 | 493089 | 505539 |
| SOx (g/day) | 14897 | 15499 | 15597 | 17496 | 17726 |
| CO2 (ton/day) | 1694 | 1785 | 1800 | 1997 | 2029 |
| PM10 (g/day) | 84344 | 78125 | 76958 | 80419 | 79711 |
| PM2.5 (g/day) | 77239 | 72744 | 71543 | 73913 | 72778 |
| Diesel PM (g/day) | 40395 | 22810 | 23525 | 11277 | 11686 |
| DEOG (g/day) | 67128 | 42059 | 40341 | 22182 | 20164 |
| Benzene (g/day) | 17841 | 8873 | 8713 | 5422 | 5578 |
| Acrolein (g/day) | 768 | 342 | 346 | 209 | 227 |
| Acetaldehyde (g/day) | 7466 | 4213 | 4123 | 2312 | 2244 |
| Formaldehyde (g/day) | 20291 | 10840 | 10673 | 6066 | 6042 |
| Butadiene (g/day) | 3425 | 1549 | 1565 | 944 | 1018 |

PM 10



PM 2.5



VMT Distribution by Speed by Segment

57/60 2009 Existing

| Speed Bin ID | Speed Range | Entire Corridor | | | | Segment1 | | Segment2 | |
|--------------|-----------------|-----------------|-------|---------|-------|----------|-------|----------|---------|
| | | Tot VMT | Tot % | PK VMT | PK % | OP VMT | OP % | PK % | OP % |
| 1 | <5 mph | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0.00 | 0.00 |
| 2 | 5 mph ~ 10 mph | 2814 | 0.08 | 2814 | 0.15 | 0 | 0.00 | 0.15 | 0.00 |
| 3 | 10 mph ~ 15 mph | 3232 | 0.09 | 3232 | 0.17 | 0 | 0.00 | 0.17 | 0.00 |
| 4 | 15 mph ~ 20 mph | 50014 | 1.38 | 46377 | 2.48 | 3637 | 0.21 | 2.48 | 0.21 |
| 5 | 20 mph ~ 25 mph | 128451 | 3.56 | 106642 | 5.70 | 21809 | 1.25 | 5.70 | 1.25 |
| 6 | 25 mph ~ 30 mph | 430133 | 11.91 | 368227 | 19.70 | 61906 | 3.55 | 19.70 | 3.55 |
| 7 | 30 mph ~ 35 mph | 523428 | 14.49 | 371147 | 19.85 | 152281 | 8.74 | 19.85 | 8.74 |
| 8 | 35 mph ~ 40 mph | 393448 | 10.89 | 159467 | 8.53 | 233981 | 13.43 | 8.53 | 13.43 |
| 9 | 40 mph ~ 45 mph | 152236 | 4.22 | 19543 | 1.05 | 132693 | 7.62 | 1.05 | 7.62 |
| 10 | 45 mph ~ 50 mph | 33901 | 0.94 | 24463 | 1.31 | 9438 | 0.54 | 1.31 | 0.54 |
| 11 | 50 mph ~ 55 mph | 144050 | 3.99 | 62650 | 3.35 | 81400 | 4.67 | 3.35 | 4.67 |
| 12 | 55 mph ~ 60 mph | 194758 | 5.39 | 45646 | 2.44 | 149112 | 8.56 | 2.44 | 8.56 |
| 13 | 60 mph ~ 65 mph | 1554868 | 43.06 | 659186 | 35.26 | 895682 | 51.42 | 35.26 | 51.42 |
| 14 | 65 mph ~ 70 mph | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0.00 | 0.00 |
| 15 | >70 mph | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0.00 | 0.00 |
| | Total | 3611333 | 100 | 1869394 | 100 | 1741939 | 100 | 1869394 | 1741939 |

Scenario: 2009 Existing

Geographic Area: Los Angeles (SC)

Analysis Year: 2009

Season: Annual

Truck %

PK: 8 %

OP: 8 %

VMT Distribution by Speed by Segment

57/60 2017 No-build

| Speed Bin ID | Speed Range | Entire Corridor | | | | Segment1 | | Segment2 | |
|--------------|-----------------|-----------------|-------|---------|-------|----------|-------|----------|---------|
| | | Tot VMT | Tot % | PK VMT | PK % | OP VMT | OP % | PK % | OP % |
| 1 | <5 mph | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0.00 | 0.00 |
| 2 | 5 mph ~ 10 mph | 2522 | 0.07 | 2522 | 0.13 | 0 | 0.00 | 0.13 | 0.00 |
| 3 | 10 mph ~ 15 mph | 21568 | 0.57 | 21568 | 1.08 | 0 | 0.00 | 1.08 | 0.00 |
| 4 | 15 mph ~ 20 mph | 296079 | 7.80 | 150887 | 7.55 | 145192 | 8.08 | 7.55 | 8.08 |
| 5 | 20 mph ~ 25 mph | 152637 | 4.02 | 126771 | 6.34 | 25866 | 1.44 | 6.34 | 1.44 |
| 6 | 25 mph ~ 30 mph | 536084 | 14.12 | 448362 | 22.43 | 87722 | 4.88 | 22.43 | 4.88 |
| 7 | 30 mph ~ 35 mph | 479146 | 12.62 | 283481 | 14.18 | 195665 | 10.88 | 14.18 | 10.88 |
| 8 | 35 mph ~ 40 mph | 608108 | 16.02 | 197935 | 9.90 | 410173 | 22.82 | 9.90 | 22.82 |
| 9 | 40 mph ~ 45 mph | 117037 | 3.08 | 10455 | 0.52 | 106582 | 5.93 | 0.52 | 5.93 |
| 10 | 45 mph ~ 50 mph | 281250 | 7.41 | 142576 | 7.13 | 138674 | 7.71 | 7.13 | 7.71 |
| 11 | 50 mph ~ 55 mph | 66041 | 1.74 | 32471 | 1.62 | 33570 | 1.87 | 1.62 | 1.87 |
| 12 | 55 mph ~ 60 mph | 15610 | 0.41 | 7880 | 0.39 | 7730 | 0.43 | 0.39 | 0.43 |
| 13 | 60 mph ~ 65 mph | 1220114 | 32.14 | 573658 | 28.70 | 646456 | 35.96 | 28.70 | 35.96 |
| 14 | 65 mph ~ 70 mph | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0.00 | 0.00 |
| 15 | >70 mph | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0.00 | 0.00 |
| | Total | 3796196 | 100 | 1998566 | 100 | 1797630 | 100 | 1998566 | 1797630 |

Scenario: 2017 No-build

Geographic Area: Los Angeles (SC)

Analysis Year: 2017

Season: Annual

Truck %

PK: 8 %

OP: 8 %

VMT Distribution by Speed by Segment

57/60 2017 Alternative 3

| Speed Bin ID | Speed Range | Entire Corridor | | | | Segment1 | | Segment2 | |
|--------------|-----------------|-----------------|-------|---------|-------|----------|-------|----------|---------|
| | | Tot VMT | Tot % | PK VMT | PK % | OP VMT | OP % | PK % | OP % |
| 1 | <5 mph | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0.00 | 0.00 |
| 2 | 5 mph ~ 10 mph | 2511 | 0.07 | 2511 | 0.12 | 0 | 0.00 | 0.12 | 0.00 |
| 3 | 10 mph ~ 15 mph | 22489 | 0.59 | 22489 | 1.10 | 0 | 0.00 | 1.10 | 0.00 |
| 4 | 15 mph ~ 20 mph | 35783 | 0.94 | 32010 | 1.56 | 3773 | 0.21 | 1.56 | 0.21 |
| 5 | 20 mph ~ 25 mph | 150166 | 3.95 | 125782 | 6.15 | 24384 | 1.39 | 6.15 | 1.39 |
| 6 | 25 mph ~ 30 mph | 495827 | 13.04 | 422302 | 20.64 | 73525 | 4.18 | 20.64 | 4.18 |
| 7 | 30 mph ~ 35 mph | 382121 | 10.05 | 231124 | 11.30 | 150997 | 8.59 | 11.30 | 8.59 |
| 8 | 35 mph ~ 40 mph | 341358 | 8.97 | 89865 | 4.39 | 251493 | 14.31 | 4.39 | 14.31 |
| 9 | 40 mph ~ 45 mph | 200372 | 5.27 | 102150 | 4.99 | 98222 | 5.59 | 4.99 | 5.59 |
| 10 | 45 mph ~ 50 mph | 103994 | 2.73 | 53187 | 2.60 | 50807 | 2.89 | 2.60 | 2.89 |
| 11 | 50 mph ~ 55 mph | 32452 | 0.85 | 0 | 0.00 | 32452 | 1.85 | 0.00 | 1.85 |
| 12 | 55 mph ~ 60 mph | 176535 | 4.64 | 0 | 0.00 | 176535 | 10.04 | 0.00 | 10.04 |
| 13 | 60 mph ~ 65 mph | 1860101 | 48.90 | 964275 | 47.14 | 895826 | 50.96 | 47.14 | 50.96 |
| 14 | 65 mph ~ 70 mph | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0.00 | 0.00 |
| 15 | >70 mph | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0.00 | 0.00 |
| | Total | 3803709 | 100 | 2045695 | 100 | 1758014 | 100 | 2045695 | 1758014 |

Scenario: 2017 Alt 2

Geographic Area: Los Angeles (SC)

Analysis Year: 2017

Season: Annual

Truck %

PK: 8 %

OP: 8 %

VMT Distribution by Speed by Segment

57/60 2037 No-build

| Speed Bin ID | Speed Range | Entire Corridor | | | | Segment1 | | Segment2 | |
|--------------|-----------------|-----------------|-------|---------|-------|----------|-------|----------|---------|
| | | Tot VMT | Tot % | PK VMT | PK % | OP VMT | OP % | PK % | OP % |
| 1 | <5 mph | 6039 | 0.14 | 6039 | 0.26 | 0 | 0.00 | 0.26 | 0.00 |
| 2 | 5 mph ~ 10 mph | 8747 | 0.21 | 8747 | 0.38 | 0 | 0.00 | 0.38 | 0.00 |
| 3 | 10 mph ~ 15 mph | 59480 | 1.41 | 55454 | 2.42 | 4026 | 0.21 | 2.42 | 0.21 |
| 4 | 15 mph ~ 20 mph | 194127 | 4.59 | 159645 | 6.96 | 34482 | 1.78 | 6.96 | 1.78 |
| 5 | 20 mph ~ 25 mph | 346698 | 8.19 | 295064 | 12.86 | 51634 | 2.67 | 12.86 | 2.67 |
| 6 | 25 mph ~ 30 mph | 522314 | 12.35 | 447627 | 19.51 | 74687 | 3.86 | 19.51 | 3.86 |
| 7 | 30 mph ~ 35 mph | 627383 | 14.83 | 362647 | 15.80 | 264736 | 13.67 | 15.80 | 13.67 |
| 8 | 35 mph ~ 40 mph | 721153 | 17.04 | 146199 | 6.37 | 574954 | 29.69 | 6.37 | 29.69 |
| 9 | 40 mph ~ 45 mph | 279234 | 6.60 | 150401 | 6.55 | 128833 | 6.65 | 6.55 | 6.65 |
| 10 | 45 mph ~ 50 mph | 97595 | 2.31 | 97595 | 4.25 | 0 | 0.00 | 4.25 | 0.00 |
| 11 | 50 mph ~ 55 mph | 92762 | 2.19 | 10695 | 0.47 | 82067 | 4.24 | 0.47 | 4.24 |
| 12 | 55 mph ~ 60 mph | 53008 | 1.25 | 53008 | 2.31 | 0 | 0.00 | 2.31 | 0.00 |
| 13 | 60 mph ~ 65 mph | 1222417 | 28.89 | 501568 | 21.86 | 720849 | 37.23 | 21.86 | 37.23 |
| 14 | 65 mph ~ 70 mph | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0.00 | 0.00 |
| 15 | >70 mph | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0.00 | 0.00 |
| | Total | 4230957 | 100 | 2294689 | 100 | 1936268 | 100 | 2294689 | 1936268 |

Scenario: 2037 No-build

Geographic Area: Los Angeles (SC)

Analysis Year: 2037

Season: Annual

Truck %

PK: 8 %

OP: 8 %

VMT Distribution by Speed by Segment

57/60 2037 Alternative 3

| Speed Bin ID | Speed Range | Entire Corridor | | | | Segment1 | | Segment2 | |
|--------------|-----------------|-----------------|-------|---------|-------|----------|-------|----------|---------|
| | | Tot VMT | Tot % | PK VMT | PK % | OP VMT | OP % | PK % | OP % |
| 1 | <5 mph | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0.00 | 0.00 |
| 2 | 5 mph ~ 10 mph | 4521 | 0.11 | 4521 | 0.19 | 0 | 0.00 | 0.19 | 0.00 |
| 3 | 10 mph ~ 15 mph | 37543 | 0.89 | 33509 | 1.43 | 4034 | 0.21 | 1.43 | 0.21 |
| 4 | 15 mph ~ 20 mph | 69728 | 1.65 | 59534 | 2.55 | 10194 | 0.54 | 2.55 | 0.54 |
| 5 | 20 mph ~ 25 mph | 307607 | 7.27 | 222194 | 9.51 | 85413 | 4.51 | 9.51 | 4.51 |
| 6 | 25 mph ~ 30 mph | 562695 | 13.30 | 443609 | 18.99 | 119086 | 6.29 | 18.99 | 6.29 |
| 7 | 30 mph ~ 35 mph | 451235 | 10.67 | 203107 | 8.69 | 248128 | 13.10 | 8.69 | 13.10 |
| 8 | 35 mph ~ 40 mph | 467955 | 11.06 | 202994 | 8.69 | 264961 | 13.99 | 8.69 | 13.99 |
| 9 | 40 mph ~ 45 mph | 111738 | 2.64 | 14247 | 0.61 | 97491 | 5.15 | 0.61 | 5.15 |
| 10 | 45 mph ~ 50 mph | 63553 | 1.50 | 63553 | 2.72 | 0 | 0.00 | 2.72 | 0.00 |
| 11 | 50 mph ~ 55 mph | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0.00 | 0.00 |
| 12 | 55 mph ~ 60 mph | 596110 | 14.09 | 341243 | 14.60 | 254867 | 13.46 | 14.60 | 13.46 |
| 13 | 60 mph ~ 65 mph | 1557552 | 36.82 | 748087 | 32.02 | 809465 | 42.75 | 32.02 | 42.75 |
| 14 | 65 mph ~ 70 mph | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0.00 | 0.00 |
| 15 | >70 mph | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0.00 | 0.00 |
| | Total | 4230237 | 100 | 2336598 | 100 | 1893639 | 100 | 2336598 | 1893639 |

Scenario: 2037 Alt 2

Geographic Area: Los Angeles (SC)

Analysis Year: 2037

Season: Annual

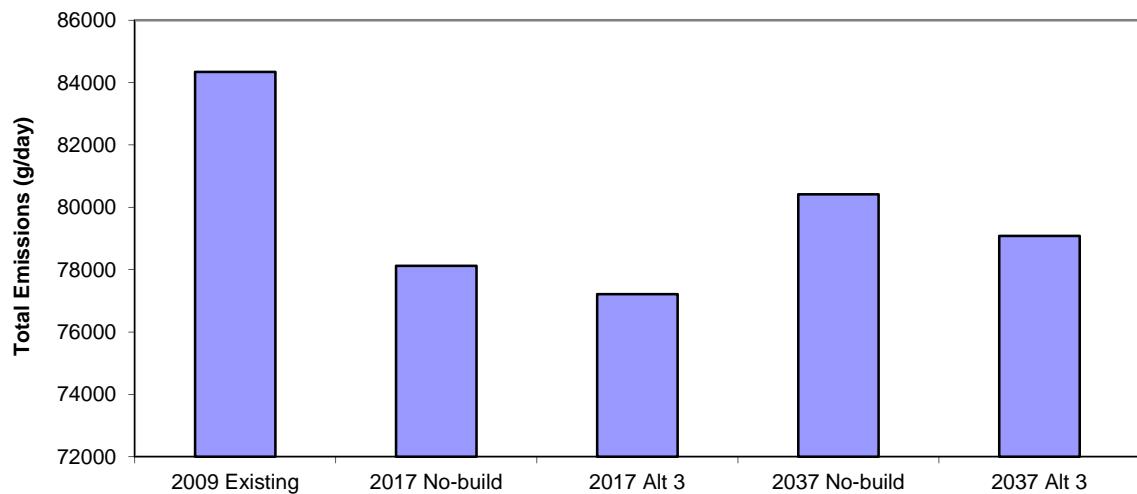
Truck %

PK: 8 %

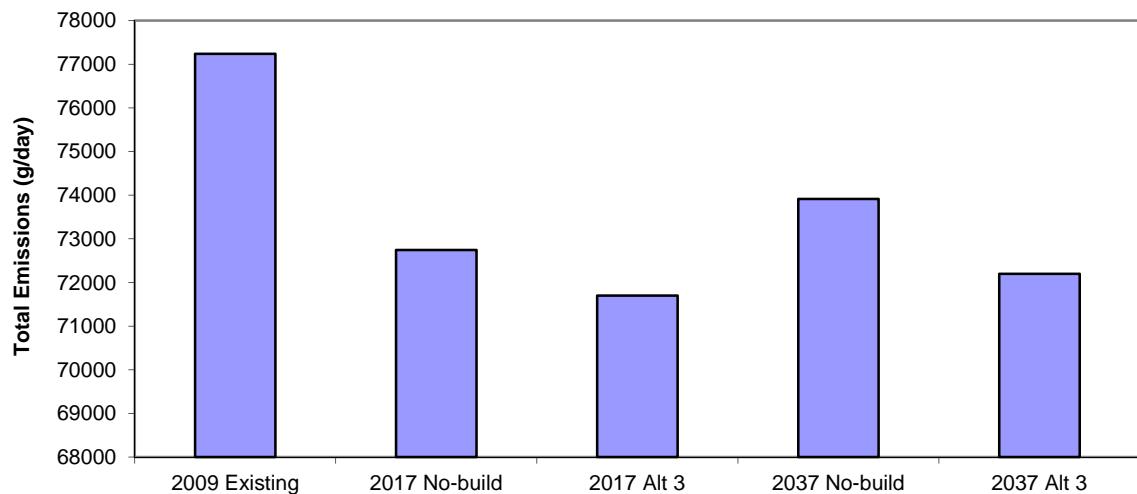
OP: 8 %

| Total Emissions | 2009 Existing | 2017 No-build | 2017 Alt 3 | 2037 No-build | 2037 Alt 3 |
|----------------------|---------------|---------------|------------|---------------|------------|
| TOG (g/day) | 835050 | 474916 | 451619 | 280644 | 273962 |
| CO (g/day) | 11477532 | 6252182 | 6083049 | 3188474 | 3139849 |
| NOx (g/day) | 2502284 | 1311922 | 1374944 | 493089 | 502870 |
| SOx (g/day) | 14897 | 15499 | 15687 | 17496 | 17450 |
| CO2 (ton/day) | 1694 | 1785 | 1809 | 1997 | 2017 |
| PM10 (g/day) | 84344 | 78125 | 77216 | 80419 | 79081 |
| PM2.5 (g/day) | 77239 | 72744 | 71699 | 73913 | 72199 |
| Diesel PM (g/day) | 40395 | 22810 | 23749 | 11277 | 11624 |
| DEOG (g/day) | 67128 | 42059 | 40074 | 22182 | 20209 |
| Benzene (g/day) | 17841 | 8873 | 8721 | 5422 | 5514 |
| Acrolein (g/day) | 768 | 342 | 348 | 209 | 223 |
| Acetaldehyde (g/day) | 7466 | 4213 | 4114 | 2312 | 2233 |
| Formaldehyde (g/day) | 20291 | 10840 | 10670 | 6066 | 5994 |
| Butadiene (g/day) | 3425 | 1549 | 1575 | 944 | 1002 |

PM 10



PM 2.5



57/60 Confluence Re-entrained Fugitive Dust Emissions Summary

| Alternative | PM10 Tons/Year | | | Change vs. No-Build | | PM2.5 Tons/Year | | | Change vs. No-Build | |
|------------------|----------------|----------|-------|------------------------|---------|-----------------|----------|-------|------------------------|---------|
| | Freeway | Arterial | Total | Tons | Percent | Freeway | Arterial | Total | Tons | Percent |
| | | | | -- | -- | | | | -- | -- |
| Existing (2009) | 52.3 | 115.5 | 167.8 | -- | -- | 12.8 | 28.3 | 41.2 | -- | -- |
| 2017 No-Build | 54.4 | 123.3 | 177.8 | -- | -- | 13.4 | 30.3 | 43.6 | -- | -- |
| 2017 Build Alt 2 | 55.0 | 121.8 | 176.8 | -0.9 | -0.5% | 13.5 | 29.9 | 43.4 | -0.2 | -0.5% |
| 2017 Build Alt 3 | 55.0 | 122.1 | 177.0 | -0.7 | -0.4% | 13.5 | 30.0 | 43.5 | -0.2 | -0.4% |
| 2037 No-Build | 59.8 | 140.7 | 200.4 | -- | -- | 14.7 | 34.5 | 49.2 | -- | -- |
| 2037 Build Alt 2 | 60.2 | 138.7 | 198.9 | -1.6 | -0.8% | 14.8 | 34.0 | 48.8 | -0.4 | -0.8% |
| 2037 Build Alt 3 | 60.2 | 139.2 | 199.3 | -1.1 | -0.5% | 14.8 | 34.2 | 48.9 | -0.3 | -0.5% |

57/60 Confluence Re-entrained Fugitive Dust Analysis - Freeway

Methodology

Calculation Methodology: USEPA AP-42, Paved Roads, Section 13.2.1, Revised January 2011
<http://www.epa.gov/ttn/chief/ap42/ch13/final/c13s2s01.pdf>

Emission Factor Calculation

$$E_{ext} = [k (sL)^{0.91} \times (W)^{1.02}] (1 - P/4N)$$

| Pollutant | Variables | | | | |
|-------------------|-----------|-------|-----|----|-----|
| | k | sL | W | P | N |
| PM ₁₀ | 0.0022 | 0.015 | 2.7 | 40 | 365 |
| PM _{2.5} | 0.00054 | 0.015 | 2.7 | 40 | 365 |

E = particulate emission factor (lbs of particulate matter/VMT)

--

k = particle size multiplier (lb/VMT)

AP-42 Table 13.2.1-1

sL = roadway silt loading (g/m²)

AP-42 Table 13.2.1-2

W = average weight of vehicles on the road (tons)

Weighted avg for Los Angeles County

P = number of wet days with at least 0.254mm of precipitation

AP-42 Figure 13.2.1-2

N = number of days in the averaging period

Annual

Emission Factor and Emission Calculations

| Alternative | Daily VMT | PM10 | | | Percent change over No Project | PM2.5 | | | Percent change over No Project |
|------------------|-----------|---------------------|---------|---------|--------------------------------|---------------------|---------|---------|--------------------------------|
| | | Emission Factor (E) | lbs/day | tons/yr | | Emission Factor (E) | lbs/day | tons/yr | |
| Existing (2009) | 2,222,237 | 0.00013 | 287 | 52 | -- | 0.00003 | 70 | 13 | -- |
| 2017 No-Build | 2,312,605 | 0.00013 | 298 | 54 | -- | 0.00003 | 73 | 13 | -- |
| 2017 Build Alt 2 | 2,335,168 | 0.00013 | 301 | 55 | 1.0% | 0.00003 | 74 | 13 | 1.0% |
| 2017 Build Alt 3 | 2,335,169 | 0.00013 | 301 | 55 | 1.0% | 0.00003 | 74 | 13 | 1.0% |
| 2037 No-Build | 2,538,526 | 0.00013 | 327 | 60 | -- | 0.00003 | 80 | 15 | -- |
| 2037 Build Alt 2 | 2,555,960 | 0.00013 | 330 | 60 | 0.7% | 0.00003 | 81 | 15 | 0.7% |
| 2037 Build Alt 3 | 2,555,960 | 0.00013 | 330 | 60 | 0.7% | 0.00003 | 81 | 15 | 0.7% |

57/60 Confluence Re-entrained Fugitive Dust Analysis - Arterials

Methodology

Calculation Methodology: USEPA AP-42, Paved Roads, Section 13.2.1, Revised January 2011
<http://www.epa.gov/ttn/chief/ap42/ch13/final/c13s2s01.pdf>

Emission Factor Calculation

$$E_{ext} = [k (sL)^{0.91} \times (W)^{1.02}] (1 - P/4N)$$

| Pollutant | Variables | | | | |
|-------------------|-----------|------|-----|----|-----|
| | k | sL | W | P | N |
| PM ₁₀ | 0.0022 | 0.06 | 2.7 | 40 | 365 |
| PM _{2.5} | 0.00054 | 0.06 | 2.7 | 40 | 365 |

E = particulate emission factor (lbs of particulate matter/VMT)

--

k = particle size multiplier (lb/VMT)

AP-42 Table 13.2.1-1

sL = roadway silt loading (g/m²)

AP-42 Table 13.2.1-2

W = average weight of vehicles on the road (tons)

Weighted avg for Los Angeles County

P = number of wet days with at least 0.254mm of precipitation

AP-42 Figure 13.2.1-2

N = number of days in the averaging period

Annual

Emission Factor and Emission Calculations

| Alternative | Daily VMT | PM10 | | | Percent change over No Project | PM2.5 | | | Percent change over No Project |
|------------------|-----------|---------------------|---------|---------|--------------------------------|---------------------|---------|---------|--------------------------------|
| | | Emission Factor (E) | lbs/day | tons/yr | | Emission Factor (E) | lbs/day | tons/yr | |
| Existing (2009) | 1,389,096 | 0.00046 | 633 | 115 | -- | 0.00011 | 155 | 28 | -- |
| 2017 No-Build | 1,483,592 | 0.00046 | 676 | 123 | -- | 0.00011 | 166 | 30 | -- |
| 2017 Build Alt 2 | 1,465,803 | 0.00046 | 668 | 122 | -1.2% | 0.00011 | 164 | 30 | -1.2% |
| 2017 Build Alt 3 | 1,468,539 | 0.00046 | 669 | 122 | -1.0% | 0.00011 | 164 | 30 | -1.0% |
| 2037 No-Build | 1,692,430 | 0.00046 | 771 | 141 | -- | 0.00011 | 189 | 35 | -- |
| 2037 Build Alt 2 | 1,668,486 | 0.00046 | 760 | 139 | -1.4% | 0.00011 | 187 | 34 | -1.4% |
| 2037 Build Alt 3 | 1,674,277 | 0.00046 | 763 | 139 | -1.1% | 0.00011 | 187 | 34 | -1.1% |